CLAIM AMENDMENTS

1. (original) A method for monitoring the contact consumption in multiple contact switches having following features:

permanent storage of the values for the rated stage voltage (U_S) of any possible switching, i.e. stage, of the threshold values for the permissible contact consumption of the switching contact as well as the resistor contacts as well as the multiple contact switch-specific parameters a and b;

determination of the actual position n of the multiple contact switch;

reading the stored value for the rated stage voltage (U_S) which corresponds to the actual multiple contact switch position;

measuring the load current (I_L) at any switchover, i.e. actuation of the multiple contact switch;

determination of the switching direction "up" or "down" of the respective switchover;

determination which is independent of the switching direction of the switched, fixed contact showing consumption

calculation of the switching currents of the breaking contacts in an inherently known manner using the relationships

$$I_{SK} = I_L/ParSek$$

$$I_{WK-A} = (U_S + I_L \times R_O/s_{res})/(2 \times R_O)$$

for the switching direction "up" and

$$I_{SK} = I_L/ParSek$$

$$I_{WK-B} = (U_S + I_L \times R_0/S_{res})/(2 \times R_0)$$

wherein $U_S = - U_S$

for the switching direction "down,"

wherein ParSek represents the number of parallel sectors, R_0 the magnitude of the transition resistance and S_{res} the resulting current splitting;

calculation which is independent of the switching direction of the respective consumption rates of the switching contact (A_{SK}), of the respective resistor contact ($_{WK}$) as well as of the breaking fixed contact according to the relationships

$$A_{SK} = a_{SK} \times I_{SK}^{b} \times S_{SK}$$

$$A_{WK} = a_{WK} \times I_{WK-A}^{b} \times S_{WK}$$

$$A_{FK} = a_{FK} \times (I_{SK}^{b} + I_{WK-A}^{b}) \times S_{FK}$$

for the switching direction "up" and

$$A_{SK} = a_{SK} \times I_{SK}^{b} \times S_{SK}$$

$$A_{WK} = a_{WK} \times I_{WK-B}^{b} \times S_{WK}$$

$$A_{FK} = a_{FK} \times (I_{SK}^{b} + I_{WK-B}^{b}) \times S_{FK}$$

for the switching direction "down;"

summing up the respective consumption rates (A_{SK}, A_{WK}, A_{FK}) to the respective total volume consumption (GA_{SK}, GA_{WK-A}, GA_{WK-B}, GA^{re}_{FK-n}, GA^{Il}_{FK-m}), non volatile storage of all summed up total volume consumptions and comparison of these values with the respective permanently stored threshold values;

generation of messages when the respective threshold values or percentage limits thereof are exceeded.

2. (original) A method for monitoring the contact consumption in multiple contact switches having following features:

permanent storage of the values for the rated stage voltage (U_S) of any possible switching, i.e. stage, of the threshold values for the permissible contact consumption of the switching contact as well as of the resistor contacts as well as the multiple contact switch-specific parameters a and b;

calculation of the resistive component R as well as the inductive component X of the transition reactance;

determination of the actual position n of the multiple contact switch;

measuring the load current (I_L) at any switchover, i.e. actuation of the multiple contact switch;

calculation of the circular current I_c as a partial amount of the load current (I_L);

determination of the switching direction "up" or "down" of the respective switchover;

determination which is dependent on the switching direction of the switched fixed contact showing consumption

determining whether the switching is effected from a non-bridging to a bridging position or not;

calculation of the switching current of the breaking contacts respectively with the relationships

$$I_{SK} = I_L/2$$

for a switching from non-bridging to bridging and

$I_{SK}=(I_L/2)x(R-jX)-jI_C$ or $I_{SK}=(I_L/2)x(R-jX)+jI_C$ in the alternative case;

calculation of the respective consumption rates of the switching contact (A_{SK}) and the fixed breaking contact (A_{FK}) according to the relationship

$$A_{SK} = a_{SK} \times I_{SK}^{b} \times S_{SK}$$

$$A_{FK} = a_{FK} \times I_{FK}^{b} \times S_{FK};$$

summing up the respective consumption rates (A_{SK}, A_{FK}) to the respective total volume consumption (GA_H, GA_G, GA^{re}_{FK-m}, GA^{Il}_{FK-m}), non volatile storage of all summed up total volume consumptions and comparison of these values with the respective permanently stored threshold values;

generation of messages when the respective threshold values or percentage limits thereof are being exceeded.

3. (new) A method for monitoring contact consumption in a multiple load selector switch with transition resistance and having multiple fixed, breaking and resistor contacts, the method comprising the steps of:

determining actual position of the multiple contacts;

measuring a load current during actuation of the multiple contacts while displacing the multiple contacts between multiple switching stages;

calculating a switching current of each of the contacts;

calculating a consumption rate of each of the multiple contacts independently of the switching direction thereof;

summing up the calculated consumption rates, thereby determining a total volume consumption; and

comparing the determined volume consumption to a threshold value, thereby issuing a warning message upon reaching the threshold value or a predetermined percentage thereof.

4. (new) A method for monitoring contact consumption in a multiple load selector switch with transition reactance, the method comprising the steps of:

calculating resistive and inductive components of the transition reactance;

determining an actual position of multiple contacts of the switch, the multiple contacts include fixed and breaking contacts;

measuring a load current at any of multiple switchover stages of the load selector switch upon actuation of the multiple contacts thereof;

~~calculating a circular current based on the load current;~~

determining a switching direction of the multiple contacts between bridging and non-bridging positions thereof during each switchover stage;

determining consumption rates of the respective multiple contacts based on the determined switching direction; and

summing up the calculated consumption rates to determined respective total volume consumption; and

comparing the stored total volume consumption to a threshold, thereby issuing a warning signal if the total volume consumption is at least equal to the threshold.